

Mapping progression across

KS1 to KS2

National Curriculum Framework March 2015

Science

This document maps out the statements in the new National Curriculum, for years 2016/17 and 2017/18, across the key stages to show progression. It is divided up into the following sections (blue = 2017/18 & pink highlight = upper year group):



<b>Sc1: Working scientifically</b>	
<b>KS1</b>	<b>Lower KS2</b>
Taught throughout both years Specifically in Autumn 1 - 2017/18	Through experiments and recording throughout both years
During <b>Years 1 and 2</b> , pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	During <b>Years 3 and 4</b> , pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:
<b>Experimental skills and investigations:</b>	
Asking simple questions and recognising that they can be answered in different ways	Asking relevant questions and using different types of scientific enquiries to answer them
Performing simple tests	Setting up simple practical enquiries, comparative and fair tests
Observing closely, using simple equipment	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
<b>Analysis and Evaluation:</b>	
Gathering and recording data to help in answering questions	<ul style="list-style-type: none"> <li>● gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>● recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> </ul>
Identifying and classifying	<ul style="list-style-type: none"> <li>● identifying differences, similarities or changes related to simple scientific ideas and processes</li> </ul>
Using their observations and ideas to suggest answers to questions	<ul style="list-style-type: none"> <li>● using straightforward scientific evidence to answer questions or to support their findings.</li> <li>● using results to draw simple conclusions, make predictions for new values and suggest improvements and raise further questions</li> </ul>
	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions

<b>Sc2: Biology Plants:</b>	
<b>KS1</b>	<b>Lower KS2</b>
2016/17 Summer 2 2017/18 Spring 2	2016/17 Summer 1
Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
Identify and describe the basic structure of a variety of common flowering plants, including trees	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Investigate the way in which water is transported within plants
Observe and describe how seeds and bulbs grow into mature plants	Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.



<b>Sc2: Biology Living Things and their habitats:</b>	
<b>KS1</b>	<b>Lower KS2</b>
2017/18 Summer 1	2016/17 Spring 1 2017/18 Autumn 1
Explore and compare the differences between things that are living, dead, and things that have never been alive.	Recognise that living things can be grouped in a variety of ways  Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	Recognise that environments can change and that this can sometimes pose dangers to living things.
Identify and name a variety of plants and animals in their habitats, including micro-habitats.	
Describe how animals obtain their food from plants and other animals, using the idea of a <b>simple food chain</b> , and identify and name different sources of food.	Construct and interpret a variety of food chains, identifying producers, predators and prey (from Animals, including humans)



Sc2: Biology Animals, including humans	
KS1	Lower KS2
2017/18 Spring 1	2017/18 Summer 1 & 2
**Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals	
**Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	
Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Identify that humans and some other animals have <b>skeletons and muscles</b> for support, protection and movement
Find out about and describe the basic needs of animals, including humans, including humans, for survival (water, food and air)	



Sc2: Biology Animals, including humans	
KS1	Lower KS2
2016/17 Autumn 1 & 2 2017/18 Spring 1 / Summer 2	2017/18 Autumn 1 & Summer
Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	
Notice that animals, including humans, including humans, have offspring which grow into adults	
Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	
Identify and name a variety of common animals that are <b>carnivores, herbivores and omnivores</b>	Identify that animals, including humans, including humans, need the right types and amount of <b>nutrition</b> , and that they cannot make their own food; they get nutrition from what they eat (Summer)
	Describe the simple functions of the basic parts of the digestive system in humans
	Identify the different types of <b>teeth</b> in humans and their simple functions
	Construct and interpret a variety of food chains, identifying producers, predators and prey (included in Living Things and their habitats)



Sc3: Chemistry Materials/States of Matter:	
KS1	Lower KS2
2016/17 Spring 1 2017/18 Autumn 2	2016/17 Autumn 1
Distinguish between an object and the material from which it is made	Compare and group materials together, according to whether they are solids, liquids or gases
<b>Describe</b> the simple physical properties of a variety of everyday materials	Observe that some materials <b>change state</b> when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C),
<b>Identify</b> and name a variety of everyday materials, including wood, metal, plastic, glass, metal, water and rock.	
<b>Compare</b> and <b>group</b> together a variety of everyday materials on the basis of their simple physical properties	
Identify and <b>compare</b> the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	
Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	



Sc3: Chemistry Materials/States of Matter	
KS1	Lower KS2
	2016/17 Autumn 1
	Identify the part played by <b>evaporation and condensation in the water cycle</b> and associate the rate of evaporation with temperature



**Sc3: Chemistry      Rocks**

KS1	Lower KS2
	2016/17 Summer 1
	Recognise that that <b>soils</b> are made from rocks and organic matter
	Describe in simple terms how <b>fossils</b> are formed when things that have lived are trapped within rock.
	Compare and group together <b>different kinds of rocks</b> on the basis of their simple physical properties



**Sc4: Physics      Motion and forces:**

KS1	Lower KS2
2016/17 Autumn 2	2016/17 Spring 2
<b>Materials:</b> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	<b>Forces and magnets:</b> notice that some forces need contact between two objects, but magnetic forces can act at a distance
	Compare how things move on different surfaces



**Sc4: Physics      Waves: Light**

KS1	Lower KS2
	2017/18 Autumn 2 & Spring 1
	Notice that <b>light</b> is reflected from surfaces
	Recognise that light from the sun can be dangerous and that there are ways to protect their eyes

	Recognise that they need light in order to see things and that dark is the absence of light
	Recognise that shadows are formed when the light from a light source is blocked by a solid object
	Find patterns that determine the size of shadows change



<b>Sc4: Physics</b>	<b>Waves: Sound</b>
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KS1	Lower KS2
	2017/18 Spring 2
	<b>Sound:</b> Identify how sounds are made, associating some of them with something vibrating Recognise that vibrations from sounds travel through a medium to the ear
	Find patterns between the pitch of a sound and features of the object that produced it
	Find patterns between the volume of a sound and the strength of the vibrations that produced it.
	Recognise that sounds get fainter as the distance from the sound source increases



<b>Sc4: Physics</b>	<b>Magnetism:</b>
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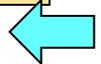
KS1	Lower KS2
	2016/17 Spring 2
	Observe how magnets attract or repel each other and attract some materials and not others
	Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.

	Describe magnets as having two poles
	Predict whether two magnets will attract or repel each other, depending on which poles are facing



<b>Sc4: Physics</b>	<b>Electricity:</b>
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<b>KS1</b>	<b>Lower KS2</b>
	2016/17 Autumn 2
	Identify common appliances that run on electricity
	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
	Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery
	Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
	Recognise some common conductors and insulators, and associate metals with being good conductors.



<b>Sc4: Physics</b>	<b>Earth &amp; Space</b>
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<b>KS1</b>	<b>Lower KS2</b>
2016/17 Autumn 1 & Summer 1	
<b>Seasonal changes:</b>	
Observe changes across the four seasons - <a href="#">one each term</a>	
Observe and describe weather associated with the seasons and how day length varies.	